

Serial No.: 09/852,383
Docket No.: AD6588 US CNT

Page 2

formaldehyde odor results do not correlate with the melt stability test for formaldehyde. Thus, Applicants' invention is surprising and hence non-obvious.

Furthermore, Applicants POM composition is used for heat stability, reduction of formaldehyde odor in resin and molded parts whereas Gibbs purpose is good thermal stability and hydrolysis resistance. Gibbs discloses the amino compounds effective to improve hydrolytic stability of polyacetal composition because the amino compound can hinder the hydrolytic degradation of polyacetal by reacting with active water molecules.

Additionally, the tertiary butylamine listed as a suitable amine by the examiner (Gibbs col. 2, lines 43-67) would not be considered suitable to one of ordinary skill in the art for the present invention, because in sample preparations the chemical is very volatile with boiling points of 44-46. (See claim 3 of the present invention.)

Applicants reiterate here the patentable differences stated in Applicant's response dated May 2, 2002 and found persuasive by the Examiner.

In Fukumoto, the pKb range of "9.4 pKb or more (desirably about 10)" in column 4, lines 31- 33 teach away from Applicants' claim 1 and 32 where the pKB ranges from about 2-8. Secondly, Fukumoto teaches the use of an acid salt. Applicants invention does not use an acid salt, but uses the base form of the aminobenzoate prior to acid salt formation. Those skilled in the art, would not combine acid salt and POM (used in Applicants' invention) as it creates an unstable and potentially dangerous reaction. And Thirdly, Applicants' invention removes the formaldehyde odor from the POM in contrast to Fukumoto which removes offensive odors such as tobacco in the vapor phase. Applicants' invention has a formaldehyde concentration at room temperature of less than about 50% of the formaldehyde concentration of the polyacetal resin and a boiling point as defined in amended claim 1. Thus, it is not obvious to one of ordinary skill in the art to use the pKb of Applicants invention.

Furthermore, Fukumoto discloses additional materials than in Gibbs and does not disclose the removal of the superpolyamide of Gibbs to reduce formaldehyde odor as in Applicant's invention.

Shinohara does not disclose the use of amino compound as in Applicants' invention (claim 1). Additionally, Shinohara et al describes the polyacetal resin compositions, which are characterized by the concentration of formaldehyde generated from a formed object in a closed environment being less than 20 ppm. It was achieved by incorporating specific organic cyclic compound having active imino group according to the formula (column 10, line 35). In Applicants invention, the higher reactivity to reduce formaldehyde concentration especially by using primary

Serial No.: 09/852,383
Docket No.: AD6588 US CNT

Page 3

amino compounds (claim 1) is caused by different formaldehyde absorption mechanism from that of the organic cyclic imino compounds of Shinohara.

Furthermore, Shinohara discloses additional materials then in Gibbs and does not disclose the removal of the superpolyamide of Gibbs to reduce formaldehyde odor as in Applicant's invention.

For the above stated reasons, the above cited art does not suggest combination to yield the present invention. However, assuming arguendo, that the above discussed prior art were combined, they still do not yield Applicants' invention. Gibbs discloses a superpolyamide for hydrolysis resistance and Shinohara, nor Fukumoto disclose the removal of the superpolyamide and reduce formaldehyde as disclosed in Applicants invention. Hence, the combination of the cited art fails to make a prima facie showing of obviousness of the present invention. Thus, Claims 1-17, 28, 29 and 33-36 are believed to be in condition for allowance.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

Tamera L. Fair

TAMERA L. FAIR
ATTORNEY FOR APPLICANTS
REGISTRATION NO. 35,867
TELEPHONE: (302) 892-7948
FACSIMILE: (302) 992-3257

Date: January 29, 2003

FAX RECEIVED
JAN 30 2003
GROUP 1700